Prof Dr Dr Friedemann Pulvermüller
Freie Universität Berlin
WS 2013/14
Progress in Brain Language Research
Wed, 4-6 pm ct, K 23/11

Graduate Course/Seminar *Progress in Brain Language Research*

Introduction

This colloquium will focus on recent advances in the investigation of brain mechanisms of language. It is designed for students and young researchers of all scientific backgrounds who are interested in an explanation of how the brain controls speech production, realises language comprehension and connects linguistic symbols with meaning and human interaction. The field of neurolinguistics will be broadly covered, with possible foci on phonological, lexical, syntactic, semantic and pragmatic questions. Further topics will be neurological language deficits, the neuroplastic changes following lesion of language relevant areas of the brain and the learning and relearning of language both in an experimental/language teaching context and in neurorehabilitation. A focus will be on explicit explanatory models of language mechanisms in the human brain.

The colloquium will cover cutting edge publications in the brain language domain and current research projects, including those currently underway at the Brain Language Laboratory of the Freie Universität Berlin. Ideal participants will aim at a BA, MA or PhD in the brain language sciences and may come from linguistics, psychology, neuroscience, or medicine. Participants may *review a recent research publication* or will be given an opportunity to *present their own research plan* or ongoing research project. In addition, *presentations of guest scientists* will be part of this course.

Recommended readings

Kiefer, M., & Pulvermüller, F. (2012). Conceptual representations in mind and brain: Theoretical developments, current evidence and future directions. Cortex, 48(7), 805-825. doi: 10.1016/j.cortex.2011.04.006

Pulvermüller, F. (2013). How neurons make meaning: Brain mechanisms for embodied and abstract-symbolic semantics. Trends Cognit Sci, 17(9), 458-470. doi: 10.1016/j.tics.2013.06.004

Technicalities

The course is part of the teaching offered by the Cluster of Excellence *Languages of Emotion*. It is open to interested students from all departments. It will be offered by Friedemann Pulvermüller together with Dr Guglielmo Lucchese under the admin support of Sabina Mollenhauer, MA.

To obtain a certificate of attendance, it is necessary to

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- attend most of the sessions (maximum misses: three),
- pre- and reprocess the session content by reading the recommended key papers, and
- present a key paper in current brain language research or, alternatively, a detailed research plan or report of own research.

Presentations should last about 30' and be supported by a powerpoint presentation and handouts to participants. If you are interested in presenting, please discuss your plan with FP directly (preferably during office hours, Wednesdays, 12-1pm, room JK 31/232).

To register for the course, please put your name down on the signup sheet provided at the first session. We will be happy to discuss any questions you may have regarding this course, be it about formalities, your presentation or wider research interests. Please contact one of us:

Sabina Mollenhauer, MA

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Friedemann Pulvermüller

Office: Raum JK 31/232
Sprechstunde: Mi 12-13 Uhr

Dates and Topics

14.10. Introduction and seminar planning.

Friedemann Pulvermüller

Overlap reduction: A key mechanism for rich vocabularies and conceptual systems?

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23.10.

Cora Kim. Brain Language Lab, FU Berlin

Italian Blues - neurophysiological and behavioral evidence for language influence on the categorical perception of color.

30.10.

Max Garagnani. Brain Language Lab, FU Berlin

Modeling the grounding of word meaning in action perception systems.

06.11.

Jeff Hanna. Brain Language Lab, FU Berlin

Neurophysiology of derivational-morphological processing in German: final results

13.11.

Guglielmo Lucchese. Brain Language Lab, FU Berlin.

The interaction of syntax and semantics in the early phase of auditory language processing

20.11.

Laura Besch. Brain Language Lab, FU Berlin

(Language Action Therapy: new speech acts)

27.11.

Benjamin Stahl. Brain Language Lab, FU Berlin

Treatment of Non-Fluent Aphasia through Melody, Rhythm and Formulaic Language

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11.12.

Tally Miller. Brain Language Lab, FU Berlin

Experimental plan: learning somatosensory words

18.12.

Luigi Grisoni. Brain Language Lab, FU Berlin.

TBA

06.01.

Prof Dr Dr Horst Müller, Universität Bielefeld

TBA

15.01.

Name	**email**	**Title**

22.01.

Name	**email**	**Title**

29.01.

Name	**email**	**Title**

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05.02.

Name	**email**	**Title**

12.02.

Name	**email**	**Title**

17.02.

Almut Sickert

Recent papers for discussion:

1. Bedny M, Caramazza A, Pascual-Leone A, Saxe R. 2012. Typical neural representations of action verbs develop without vision. Cereb Cortex. 22:286-293.
2. Hickok G. 2012. Computational neuroanatomy of speech production. Nature reviews Neuroscience. 13:135-145.
3. Hickok G, Houde J, Rong F. 2011. Sensorimotor integration in speech processing: computational basis and neural organization. Neuron. 69:407-422.
4. Pickering, M. J., & Garrod, S. (2013). An integrated theory of language production and comprehension. [Research Support, Non-U.S. Gov't]. Behav Brain Sci, 36(4), 329-347. doi: 10.1017/S0140525X12001495
5. Yeung, H. H., & Werker, J. F. (2013). Lip Movements Affect Infants' Audiovisual Speech Perception. Psychological Science, in press.